Potential Revisions to Proposed Additions

Fish Tissue, DDT:

- 1 proposed listing
- Narrative critiera: [HYPERLINK "https://secure.sos.state.or.us/oard/viewSingleRule.action;JSESSIONID_OARD=nXKqKpbM12zcc_L6afas4yZMxn3tkH4kyIiEl2lhTnoDS8dfoKk-!2024649768?ruleVrsnRsn=68746"]

  Toxic Substances

  (1) Toxic Substances Narrative. Toxic substances may not be introduced above natural background levels in waters of the state in amounts, concentrations, or combinations that may be harmful, may chemically change to harmful forms in the environment, or may accumulate in sediments or bioaccumulate in aquatic life or wildlife to levels that adversely affect public health, safety, or welfare or aquatic life, wildlife or other designated beneficial uses.

- DEQ opposed the listing. Their methodology only lists for fish tissue for mercury.
- The segment is already listed for DDT based on a fish consumption advisory.
- We received no other comments.

Total Phosphorus:

- 35 proposed listings
- Narrative criteria: 340-041-0007

  Statewide Narrative Criteria

  (1) Notwithstanding the water quality standards contained in this Division, the highest and best practicable treatment and/or control of wastes, activities, and flows must in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels.

- EPA Methodology:

  Parameter: **Total Phosphorus**

  Beneficial Uses Affected: Resident Fish and Aquatic Life
  Water Contact Recreation
  Drinking Water

  Phosphorus is an essential element for plant life, but when there is too much of it in water, it can speed up eutrophication (a reduction in dissolved oxygen in water bodies caused by an increase of mineral and organic nutrients) of rivers and lakes. Excessive phosphorus in surface waters can

cause negative ecological impacts to waterbodies by stimulating harmful algal blooms, which when they eventually die off and consume dissolved oxygen (DO) from the water column.

Oregon has not set a criterion for total phosphorus. EPA has recognized the relationship between phosphorus, as a major nutrient, and excessive aquatic weed and algae growth, and lake and reservoir eutrophication. EPA has recommended total phosphorus values in various documents (see table below) ranging from 8.8 to 100 ug/L.

Total Phosphorus (ug/L) recommendation	**Reference**	**Waterbody type**
100 ug/L	EPA 1987 Gold book	Streams or other flowing waters not directly discharging to lakes or impoundments
50 ug/L	EPA 1987 Gold book	Any stream at the point where it enters any lake or reservoir
25 ug/L	EPA 1987 Gold book	The lake or reservoir
10 – 47 ug/l, depending on ecoregion	EPA 2001 Ecoregional nutrient criteria recommendations	Rivers and streams
8.8 – 17 ug/L, depending on ecoregion	EPA 2000 Ecoregional nutrient criteria recommendations	Lakes and reservoirs

In 2010 Water Quality Report, Oregon DEQ used 50 ug/L as a benchmark to evaluate water quality data for phosphate phosphorus. Water bodies with total phosphates as phosphorus (P) greater than 50 ug/L were placed in Category 3B Insufficient Data – Potential Concern for conditions that may result in not meeting water quality standards. EPA does not agree with this evaluation.

Nutrients cannot be treated as human introduced pollutants such as pesticides or toxics, because they are not uniquely generated through human input or disturbance. Rather, nutrients are components of natural systems, like temperature and dissolved oxygen, that are present even in the most pristine settings. Nutrients (nitrogen and phosphorus) are one of the leading causes of water quality impairment in our Nation's rivers, lakes and estuaries.

Assessment Methodology: Category 5: Water Quality Limited (303(d) list)

It is EPA's goal for this listing cycle to add to Category 5 only the most egregious problems. Our assessment method had two parts:

- Greater than 10 percent of the samples above 100 ug/L and a minimum of at least two samples above this value for the time period of interest. Where there were 2 or more data points per day, EPA only used the highest value, AND;
- The waterbody was either already, or proposed for this listing cycle, impaired for any one of the following parameters: pH, Chlorophyll a or dissolved oxygen.

- EPA's assessment method is intended only to be a rough screen to capture the most problematic waters. We encourage Oregon DEQ to develop their own methodology.

- Gretchen used the high end of the EPA recommended threshold and a secondary line of evidence to determine impairment.
- DEQ opposed the listings. They have no methodology for interpreting the narrative.

- Their comments opposed the listings in general, but then commented on 4 specific listings, two for which they disagreed that they exceeded the threshold, and two for which they corrected the river miles and said they were "ok to list."
- The "Trade Associations", comprised of NW Pulp and Paper Association, Oregon Farm Bureau and Oregon Forest and Industries Council, as well as Oregon Association of Clean Water Agencies also opposed the listings, based on our interpretation of the narrative.
- NWEA provided comments to DEQ citing their lack of use of their narratives and their obligation to assess for them.

Dissolved Oxygen:

- 46 total listings (revised: do not list bolded segments; maintain others)
- Numeric criteria: 340-041-0016
- **DEQ commented on 6 segments of the Tualatin that EPA disapproved for delisting and provided a letter from ODFW.**
  - ODFW confirmed that there was not spawning on only 3 of the segments (which EPA still viewed as insufficient documentation, both scientifically and procedurally; Dairy Creek, Tualatin River from RM 0 to 65.6 and Nyberg Creek.)
  - One listing was in error and needed the RM to be corrected (Johnson Creek RM 0 to 7.7 corrected to RM 2.1 to 4.)
  - ODEQ concurred that two segments did have spawning, but were now attaining the spawning criteria (Johnson Creek RM 2.1 to 4, Tualatin River RM 62.6 to 75.6)
  - We also received comments from Clean Water Services and OR Association of Clean Water Agencies agreeing with DEQ.
- **DEQ commented on 7 listings where they disagreed with our interpretation of the numeric WQS. (Lobster Creek, Chenoweth Creek, Ackerley Creek spawning, Ackerley Creek year-round, Munsel Creek, Beaver Creek, Metolius River)**
- DEQ commented on 4 segments on the Willamette that EPA disapproved for delisting, based on data analysis.
  - One of these we agreed with and already corrected. (NF Silver Creek)
  - Gretchen re-assessed the data for the remaining 3 and maintained that they were not attaining based on the numeric WQS. (Silver Creek, Rock Creek, South Yamhill)
- DEQ commented on another proposed listed and disagreed with the data analysis.
  - Gretchen reviewed the analysis and maintained the segment was not attaining the numeric WQS. (Coast Fork Willamette)
- DEQ disagreed with the data analysis on 5 other listings and offered corrections. EPA concurred with each of those.

Copper:

- 7 listings
- **Beneficial Uses Affected:** Aquatic Life – Fresh Water and Marine Water
Human Health – Water and Fish Ingestion, Fish Consumption and Drinking Water
- **Narrative Criterion:** OAR 340-041-0033(See Appendix B)
- **Numeric Criterion:** OAR 340-041-0033 (See Appendix B)
- **Old criterion: Numeric: 3.62 ug/L at 25 hardness.**

- **New criterion: Copper BLM :** The aquatic life criteria for copper in freshwater are functions of water chemistry including ions, alkalinity, organic carbon, pH, and temperature in the water column. The criteria are derived using the biotic ligand model referenced in Table 30 Endnote N. DEQ prefers to use criteria derived from site-specific measured input parameter values for the model. If measured data for one or more of the model input parameters are not available, DEQ will follow the copper criteria implementation procedures56 and (1) substitute an estimated input parameter or use default values, or (2) derive a default action value using regional default input parameter values for the biotic ligand model. DEQ will subsequently assess the data according to the exact binomial test procedures.
- WQS change, now Cu BLM numeric
- We received comments from the Trade Associations and Oregon Associations of Clean Water Agencies opposing the listings, citing outdated criteria and inappropriate hardness values were used in the assessment.
- DEQ commented on 2 specific listings, one updating the RM and one questioning the data analysis. We maintained both listings.
- Cu BLM has been approved since we conducted the assessment. Chris Zell attempted to reassess using OR's incomplete implementation guidance, but results proved contradictory.
- HQ and OGC recommend no action on Cu at this time, citing the lack of necessary finalized implementation guidance to assess the data against the WQS.

Ocean Acidification:

- No proposed listings.
- **340-041-0007**
  Statewide Narrative Criteria
  (10) The creation of tastes or odors or toxic or other conditions that are deleterious to fish or other aquatic life or affect the potability of drinking water or the palatability of fish or shellfish may not be allowed;

  340-041-0011
  Biocriteria

  Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities.

- We received comments in favor of listing from CBD and Oregon Wild, citing available data and EPA guidance.
- We received comments opposed to listing from DEQ based on our interpretation of the narrative.
- We received a neutral comment from staff at the Coquille Tribe, acknowledging the issue, but stating it should be addressed through a WQS action first.